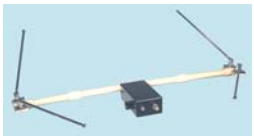
Miniature LED Blinking Circuit Kit

•Ideal for sign displays or to simulate auto alarm •Contains six miniature LEDs, contains two each of red, green and yellow •Alternates flashing •Dimensions: ½" x ½" •Uses 9V battery not included (#292-035)

Order #	(kit)
80-745	$4.29

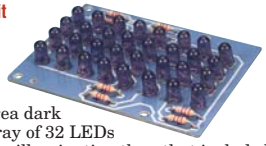
Radio Direction Finder



Connects to any UHF/VHF amateur radio. Great for fox hunts and tracking down unknown transmitters. The tones in conjunction with RF signal level meter will direct you to the transmitter. Operates on one 9V battery (#292-035).

Order #	(ea.)
80-1415	$46.71

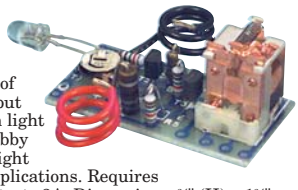
Infrared 4 x 8 LED Array Kit



Intended for CCTV applications, this device will illuminate any dark area viewed with a CCD camera, yet leave that area dark to the naked eye. The array of 32 LEDs provide considerably more illumination than that included with CCTV cameras, with much lower cost and power consumption than typical infrared lights. Dimensions: ½" (H) x 3" (W) x 2¼" (D). **Note:** Assembly required.

Order #	(1-4 kits)	(5-9 kits)	(10 kits-up)
28-8070	$8.35	$7.77	$6.72

Photo Sensor Kit



Small PC board has built-in sensor that detects the presence of light. The SPDT output relay energizes when light is removed. Great hobby item for automatic night lights and similar applications. Requires 9~12VDC. Relay contacts 3A. Dimensions: ¾" (H) x 1¾" (W) x 1¾" (D). **Note:** Assembly required.

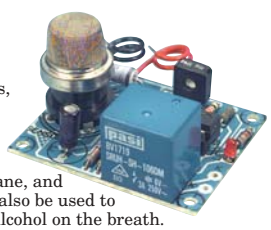
Order #	(1-4 kits)	(5-9 kits)	(10 kits-up)
28-8086	$8.46	$7.87	$6.82

Eight Channel Parallel Port Relay Board Kit

Complete kit includes circuit board with eight output relays, and software for accessing through the printer port of an IBM PC or compatible computer. Each SPDT relay may be individually switched via the PC and is capable of handling a 3A load. Eight board mounted status LEDs show relays state. Ideal for controling lights and other electronic devices from a PC. Because the hardware requirements are minimal (80286 or later with only 1Mb of HDD space), this kit adds practical use to obsolete computer equipment. Requires external 12VDC, 800mA power supply and available parallel port. Board dimensions: 5⅛" (W) x 1"(H) x 2¼"(D). Assembly required.

Order #	(1-4 kits)	(5-9 kits)	(10 kits-up)
28-6348	$28.79	$26.26	$24.35

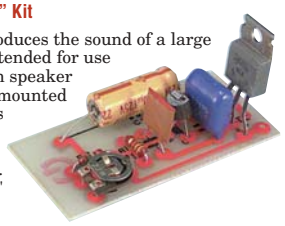
Gas Sensor Kit



Intended solely for educational and entertainment purposes, this kit detects the presence of many types of flammable gas including alcohol, acetone, benzene, propane, and carbon monoxide. May also be used to detect the presence of alcohol on the breath. Output is provided via board mounted LED and SPDT 3A relay. Dimensions: 1⅜" (H) x 2¼" (W) x 1¾" (D). **Note:** Assembly required.

Order #	(1-4 kits)	(5-9 kits)	(10 kits-up)
28-8078	$12.64	$11.75	$10.07

Simulated "Ships Horn" Kit



Unique novelty kit produces the sound of a large ship or barge horn. Intended for use with an external 8ohm speaker (not included). Board mounted potentiometer controls output level. Requires 12VDC, 600mA. Audio output 5W max. Board dimensions: 2¼" (W) x 1" (H) x 1⅛" (D). Assembly required.

Order #	(1-4 kits)	(5-9 kits)	(10 kits-up)
28-6326	$7.30	$6.78	$6.19

TV Notch Filter Kit

•Removes unwanted signals and interferences from other stations and outside sources during television viewing •Ideal for blocking unwanted channels •Applicable for channels 2 through 22 cable

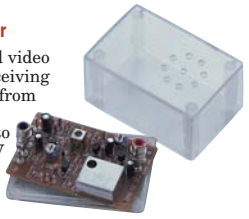
Order #	(kit)
80-900	$16.11

Chaser Lights Kit

Use this kit like a theater marquee. Every fourth LED chases around the display to give you a dazzling effect. You can use up to 40 LEDs. Only your imagination limits the possibilities. This kit contains 16 LEDs. Power requirements: 5~15VDC. Dimensions: 1.5" x 1.75" •Uses one 9V battery not included (#292-135)

Order #	(kit)
80-2085	$16.11

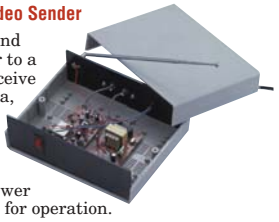
Wireless Audio/Video Sender



Kit will transmit audio and video signals over the air to a receiving TV. Kit may receive signal from CCTV camera, video camera, etc. and transmit to any receiving television. 9V battery or 12VDC required for operation. Antenna also required.

Order #	(kit)
28-5850	$10.15

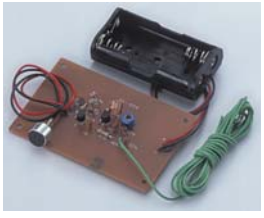
Deluxe Wireless Audio/Video Sender



Kit will transmit audio and video signals over the air to a receiving TV. Kit may receive signal from CCTV camera, video camera, etc. and transmit to any receiving television. Kit includes deluxe case, antenna, and internal power supply. 120VAC required for operation.

Order #	(kit)
28-5855	$25.70

FM Transmitter



Kit is surprisingly powerful despite its small component count and operating voltage. Kit will easily transmit through floors and walls. Kit will transmit to any FM receiver via attached microphone. 3~5VDC required for operation.

Order #	(kit)
28-5870	$7.16

Audio Amplifiers

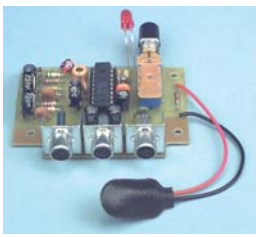
•Sound enhancer perfect for an ultra-sensitive intercom system •Can pick-up sounds from across the room •Comes with a mini electret microphone •Dimensions: 1" x 1¾" •6~12VDC •Uses 9V battery not included (#292-035)

Order #	Description	(kit)
80-690	Kit	$11.50
80-3045	Pre-built	30.25

Reference and Education

Books . . . . . .403~405
Elenco . . . . . .398~400
Kits . . . . . .397~402
Robotics Kits . . . .398~399
Sam's Photofacts 404
Semiconductors . . . . .See Section 16
Service and Repair . . . . . .403~405
Transformers 403
Ucando 402
Velleman Kits . . .400-402
Video Educational Tapes 402

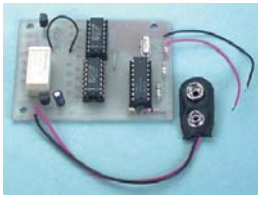
FM Stereo Transmitter Kit



•This kit will transmit any stereo signal when plugged into the RCA jacks to any FM radio •40dB stereo separation •Comes with right and left volume controls •Uses one 9V battery not included (#292-035)

Order #	(kit)
80-760	$32.95

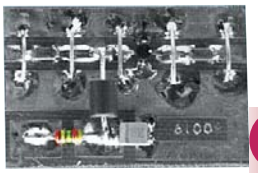
Sweet 16 Tone Decoder Kit



This kit operates great through phone lines, radios or scanners. The decoder detects DTMF data when each button is pressed and sends a unique voltage to the electronics on the printed circuit board which activates a circuit on or off. There are 16 different touch tones, 12 of which are on a normal phone; special key pads have four additional buttons (a, b, c, d). This decoder gives an output voltage for all 16 tones. If you want to use all 16, you can build your own board with 16 relay and driver circuits on it, or to get fancier, use a flip-flop IC to achieve a toggle effect or a 555 timer to provide a timing effect. Uses a 9V battery not included (#292-035). Dimensions: 2.2" x 2.8".

Order #	(kit)
80-2100	$35.30

RF Amplifier Kit



RF amplifier takes a high level signal and amplifies it to approximately 1V. Power requirements 12VDC. 50mA-some surface mount components.
•**Limited quantities**

Order #	Gain (1MHz)	(kit)
80-1090	8db	$16.14
80-1095	20db	21.78

Strobe Circuit Kit

•Can be used as emergency warning light on autos, radio tower or anywhere a strobe light is needed •Variable flash rate •Dimensions: 3½" x 1¾" •Operates on 6/12VDC

Order #	(kit)
80-735	$13.07

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Jumbo LED Kits

These kits are great signs and attention grabbers. Includes two jumbo alternate flashing LEDs. Power requirement 9~12VDC. The kit comes with four cartoons designed to slip easily over the LEDs. Dimensions: .75" x 1" x 1"

Order #	Description	(kit)
80-2120	Red LED	$6.14
80-2125	Green LED	6.14

ELENCO Solder Practice Kit

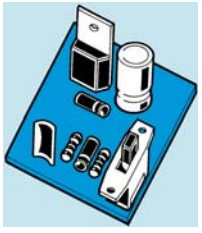
Good soldering requires practice and an understanding of soldering principles. This practical soldering project kit will help you understand the basics of working with printed circuit boards, achieve good soldering techniques and become familiar with a variety of electronic components. Mfr. #SP1A.

Order #	(kit)
80-4410	$9.27

ELENCO Electronic Playground

Easy-to-build experiments teach you the operation of over 50 electronic circuits. Fully assembled no tools or soldering needed. Learn about voltage, current, transformers, speakers, and more. Build these exciting circuits: finger touch lamp, voltmeter, electronic kazoo, transistor radio, metal detector. Specifically designed for beginners. Requires one 9V battery (#293-035), not included. Mfr. #EP-50.

Order #	(kit)
80-5025	$20.59



ELENCO Burglar Alarm Kit

Have fun and learn basic electronic principles while building this simple burglar alarm. Use to protect your car, house, room or even your closet. Mfr. #K-23.

Order #	(kit)
80-4420	$9.27

ELENCO Crystal Radio Kit

Learn how radios work with this AM radio kit. Crystal diode converts RF to audio, no batteries required. Safe, solderless, educational and fun! Includes earphone and easy-to-read instructions. For ages 10 and up. Mfr. #MX-901C.

Order #	(kit)
80-5015	$8.95

ELENCO 75-in-1 Electronic Project Lab

Learn basic principles of electricity, electronics, physics and magnetism. It includes everything you need to build: Timer buzzer, electronic organ, motion detector, voltage detector, logic tester and many, many more. Illustrated, lab-style manual included. Requires four "AA" batteries (not included). Mfr. #MX-905.

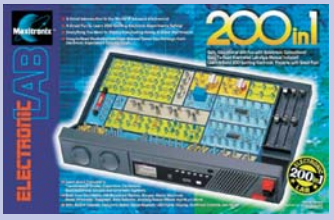
Order #	(kit)
80-5030	$29.96

ELENCO 130-in-1 Electronic Project Lab Kit

Includes 130 experiments to teach the basic principles of electricity, electronics, physics and magnetism. Comes with built-in speaker, 7-segment LED display, two fully integrated circuits and rotary controls. It includes everything you need to build an AM broadcast station, electronic organ, strobe lights, timer, logic circuits and much more. Easy-to-read, illustrated, lab-style manual included. Requires six "AA" batteries (not included). Mfr. #MX-906.

Order #	(kit)
80-5035	$41.20

ELENCO 200-in-1 Electronic Project Lab Kit



Learn about transistors, transformers, diodes, capacitors, oscillators, basic electronic circuits and schematic symbols while completing the 200 fun and educational projects. Build your own radio, AM broadcast station, burglar alarm, electronic game, telegraph, rain detector and much more. Comes with built-in speaker, earphone, meter, seven-segment LED digital display and out-front controls. Easy-to-understand, illustrated, manual included. Requires six "AA" batteries (not included). Mfr. #MX-907.

Order #	(kit)
80-5040	$53.95

ELENCO 300-in-1 Electronic Project Lab Kit

Everything you need to build 300 exciting electronic projects. Uses spring and breadboard hook-up methods so no soldering or tools are required. Projects include a transistor radio, delayed timer, digital light dimmer, electronic candle, voice level meter, voltage controlled amplifier and many more. Fun, educational and exciting! Easy-to-understand, illustrated, manual included. Requires six "AA" batteries (not included). Mfr. #MX-908.

Order #	(kit)
80-5045	$69.95

ELENCO 500-in-1 Electronic Project Lab Kit

Learn the basics of electronics and put your knowledge to work creating 500 different electronic experiments, special lighting effects, radio transmitter and receivers, amazing electronic sound effects, cool games and more. Includes built-in breadboard for easy wiring and connection of components and an LCD indicates the information during the experiments in process. Build your knowledge by exploring amplifiers, analog and digital circuits plus how to read schematic diagrams. Includes transistors, transformers, diodes, resistors, capacitors, phototransistors, integrated circuits, speaker, earphone, LEDs, LED digit display and a fact-filled, illustrated, lab-style manual. Requires six "AA" batteries (not included). Mfr. #MX-909.

Order #	(kit)
80-5050	$169.00

ELENCO Radio Controlled Race Car Kit

The purpose of this project is to expand your understanding of basic transmitters, receivers and electronic switching theories. Your Turbo King Car will be built from the ground up. You'll learn about gears, motors, printed circuit boards and integrated circuits from our detailed assembly and training manual. You will construct each section, explore the circuitry and troubleshoot it. The completed car features seven remote functions, flashing top light and single channel operation. The remote control is included. Requires four "AA" and one 9V battery (not included). Mfr. #RCC7K. Kit requires soldering. Ages 10 and up.

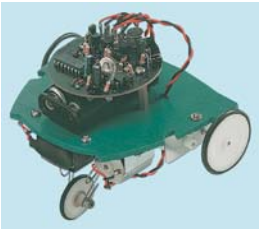
Order #	(kit)
80-4415	$27.95

ELENCO Deluxe Variable Regulated Power Supply Kit

Now you can build your own variable regulated power supply. This kit has three fully regulated supplies; 1.5~15V @ 1A, - 1.5~- 15V @ 1A or (3-30V @ 1A) and 5V @ 3A. It also features short circuit protection in a heavy-duty ventilated metal case.

Order #	(kit)
80-1165	$63.50

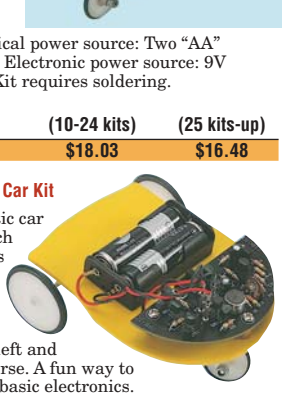
ELENCO Turning Frog Robot Kit



This is a fascinating robot kit. The robot frog moves forward when it detects sound and repeats the following movements sequentially: Start (move forward) -> stop -> left turn -> stop -> right turn -> stop. Includes two sets of gear motors (unassembled). Mechanical power source: Two "AA" batteries (not included). Electronic power source: 9V battery (not included). Kit requires soldering. Mfr. #21-882.

Order #	(1-9 kits)	(10-24 kits)	(25 kits-up)
80-6210	$18.99	$18.03	$16.48

ELENCO Sound Detecting Car Kit



Build this exciting robotic car kit. It has a sensor, which detects sound and reacts to physical contact. It moves forward until it detects a noise or runs into something, which makes it reverse to the left and continue on the new course. A fun way to learn about motors and basic electronics. Soldering required. Requires two "AA" batteries, #292-015 (not included). Mfr. #21-881.

Order #	(1-9 kits)	(10-24 kits)	(25 kits-up)
80-5800	$18.31	$17.81	$15.71

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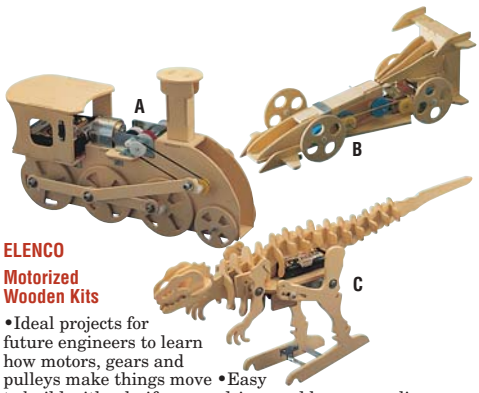


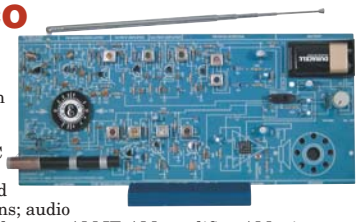
ELENCO
Motorized Wooden Kits

•Ideal projects for future engineers to learn how motors, gears and pulleys make things move •Easy to build with a knife, screwdriver and long nose pliers, no soldering required •Includes all necessary parts: Pre-punched boards, pulleys, gears, shafts, switch, motor, battery holder and easy-to-follow instructions •Batteries are not included

Fig.	Order #	Type	Batteries	(ea.)
A	80-5820	Train Kit	Four "AA"	$19.99
B	80-5810	Car Kit	Two "AA"	19.99
C	80-5805	Tyrannomech Kit	Two "AA"	19.99

ELENCO

AM/FM Radio Kit



Build your own AM/FM radio. **Kit includes:** •11⅝" x 5¼" PC board, 52 page manual divided into nine lessons; audio amplifier, AM detector, AM IF, AM amplifier, AM mixer and oscillator, FM detector, first FM IF, second FM IF, and FM RF stages. "Superheterodyne" receiver of standard AM (amplitude modulation) and FM (frequency modulation) broadcast frequencies.

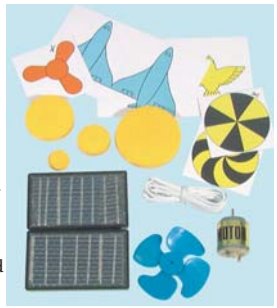
Order #	Description	(kit)
80-1195	AM/FM	$34.95
80-1200	AM	18.95

Motion Detector Kit

Compact and portable. Adds safety to your home or office. Learn the basics of motion detector technology. Uses a pyroelectric infrared sensor. Simple and fun to build. Battery operated. Complete with all parts, PC board, case, schematic and extensive training manual.

Order #	(kit)
80-1290	$26.39

ELENCO Solar Educational Kit



This kit is designed to let you build your own solar models. **The kit includes:** •Solar cell module •Solar energy booklet explaining the why's and how's of solar energy •Small DC motor •Screws and nuts •Wire with motor clips •Colored spinner discs •Paper airplane and bird models •Four sizes of plastic turntables ⅝", 1", 1½" and 2" •Plastic spinner •Mfr. #AK-530

Order #	(kit)
80-4460	$9.27

Telephone Kit

Build your own high-tech see thru plastic telephone. You will learn theory on how telephones work and then proudly show off your work with the transparent phone case. Neon lamps flash when phone rings. Comes complete with all parts and manual.

Order#	(kit)
80-1175	$17.95

ELENCO Snap Circuit Kit with Custom Box and Student Guide

The model SC-100R contains over 30 parts to introduce students at the elementary level to the world of electricity and electronics. This kit includes a custom parts organizer box and a comprehensive Student Guide. Build over 100 experiments from the easy-to-follow color manual by simply snapping all the parts in place. No tools needed. Students will learn about resistors, capacitors, motors, batteries, series/parallel circuits and much more. Requires two "AA" batteries (not included) or an AC adaptor.

Order #	(1-9 kits)	(10-24 kits)	(25 kits-up)
80-6470	$35.95	$33.95	$31.95

ELENCO Electronic Snap Circuit Kit with Optional Custom Case and Curriculum

This project kit makes learning electronics a snap. Just follow the colorful pictures in the manual and build over 300 projects, such as AM radios, burglar alarms, flashlights, doorbells and more. Topics covered include resistors, capacitors, transistors, motors, integrated circuits, series/parallel circiuts, switches and batteries. Contains over 60 parts that are mounted on plastic modules and snap together with ease. **The SC300R** includes a lightweight, durable case with custom foam inserts to store all snap circuit parts. Missing components are easy to identify. **The SC300R** also includes a comprehensive curriculum with a student guide. No tools required. Students as early as 4th grade on up to high school will enjoy learning and have fun working with snap circuits. Requires four "AA" batteries, #292-020 (not included), or an AC adaptor.

Order #	Mfr. #	Figure	(1-9 kits)	(10-24 kits)
80-5825	SC-300	A	$50.95	$48.91
80-6465	SC-300R	B	94.95	93.95

ELENCO Action Kit Electronic Lab

Discover how an electric bell is constructed and how it's made to ring. Build your own operating motor. Find out how a generator makes the electricity that makes things work. These are just a few of the many exciting experiments you can perform with this action lab kit. Safe, solderless, educational and fun! Includes easy-to-read, illustrated, lab-style manual. Requires two "AA" batteries (not included). For ages 10 and up. Mfr. #MX-902.

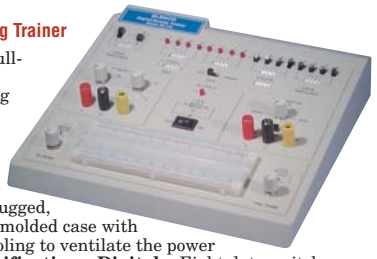
Order #	(kit)
80-5020	$25.80

ELENCO Diode/Transistor Tester Kit

Build your own diode/transistor tester. This dynamic tester allows checking of transistors and diodes in circuit. You can identify NPN or PNP transistors. Also checks all types, small or large power and identifies anode or cathode of diodes.

Order #	(kit)
80-1170	$27.50

ELENCO Digital/Analog Trainer



A low cost, full-function digital/analog trainer that meets the needs of electronic training programs. Rugged, high impact molded case with flow-thru cooling to ventilate the power supply. **Specifications: Digital:** •Eight data switches •Two no bounce logic switches •Eight LED readouts, buffered •Clock frequency 1Hz, 1KHz, 100KHz and 60Hz •Clock amplitude 5V p-p square wave **Analog:** •Function generator, sine and square wave •Frequency adjustable in two ranges from 200~4KHz •Amplitude 4V p-p sine wave, 12V p-p square wave **General:** •Two power supplies •Two undedicated potentiometers 1Kohm and 100Kohm •One breadboard with 830 tie points including two bus strips •Dimensions: 11" (L) x 11" (W) x 2" (H)

Order #	Mfr. #	(ea.)
80-4395	XK-150	$99.99

ELENCO Solder Station Kit

Build your own solder station with variable temperature control. Electronically controlled from 5~40 watts. Includes heavy-duty soldering iron. Mfr. #SL5-40K.

Order #	(kit)
80-4400	$30.90

ELENCO Telephone Line Analyzer Kit

A telephone line analyzer that provides fast indication of telephone line polarity, ring and line voltage levels, condition of phone line from user's telephone to central telephone office. You can also check basic telephone functions and condition of telephone line cord.

Order #	(kit)
80-1210	$31.50

ELENCO VOM Kit

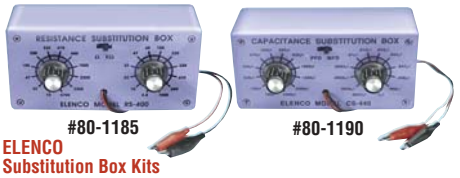
Build your own analog meter kit. **Features include:** •20K/V •18 ranges •3½" meter •Mirrored scale •Transistor test •Audible continuity test •Includes test leads and detailed instruction manual **Specifications:** •DC voltage ranges: 0.1V, 0.5V, 2.5V, 10V, 50V, 250V, 1000V •AC voltage ranges: 10V, 50V, 250V, 1000V •DC current ranges: 50µA, 2.5mA, 25mA, 250mA, 10A •Resistance ranges: x1, x10, x100, x1000, x10000 •Dimensions: 3.7" (W) x 5.7" (L) x 1.25" (D)

Order #	Mfr. #	(1-9 kits)	(10 kits-up)
80-5060	M-1250K	$25.29	$22.86

ELENCO Digital Multimeter Kit

This easy to build meter kit is the perfect for any training program or hobbyist. **Features include:** •3½ digit LCD display •18 ranges •Transistor test •Diode test •Overload protection •Includes test leads and detailed manual **Specifications:** •DC voltage ranges: 200mV, 2V, 20V, 200V, 1000V •AC voltage ranges: 200V, 750V •DC current ranges: 200µA, 2mA, 20mA, 200mA, 10A •Resistance in ohms: 200, 2K, 20K, 200K, 2M •Dimensions: 2.9" (W) x 5" (L) x 1" (D)

Order #	Mfr. #	(1-9 kits)	(10 kits-up)
80-4770	M-1005K	$24.95	$23.43



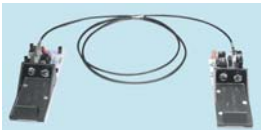
#80-1185 #80-1190

ELENCO Substitution Box Kits

Easy-to-assemble kits help quickly identify or simulate proper resistance values. 24 different values in each kit.

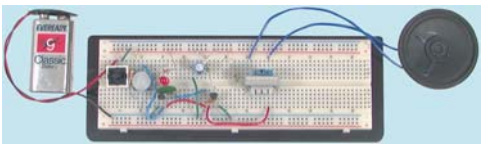
Order #	Description	(kit)
80-1185	Resistor (10ohm~1Mohm)	$17.37
80-1190	Capacitor (10pF~.1µfd)	17.37

ELENCO Fiber Optics Kit



Learn the basics of fiber optics data communications while you build this exciting kit. Comes complete with all the necessary components, including PC board and fiber optics cable, also separate transmitter and receiver.

Order #	(kit)
80-1305	$27.93



ELENCO Basic Electronic Experiments Kit

Transforms any standard breadboard into an electronic learning center. Contains parts to perform 50 experiments including electronic keyboard, finger touch lamp, metal detector, burglar alarm, water alarm, siren, space gun and electronic kazoo. Requires breadboard and one 9 volt battery (not included). Mfr #PK-101.

Order #	(kit)
80-4440	$25.80

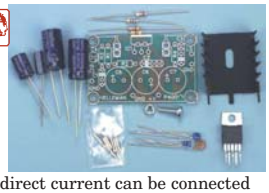
Velleman

velleman-kit

200W Mono/Stereo Amplifier Kit

•Universal: Stereo or mono amplifier, three input sensitivities are selectable •Robust: Overload and short-circuit protection, protection against incorrect power supply polarity and thermally protected •Speaker transient suppression **Specifications:** •RMS output power: 2 x 50W/4ohm; 2 x 40W/8ohm •RMS mono-bridged power: 100W/8ohm •Total music output: 200W •Harmonic distortion: 0.01% at 1KHz •Signal-to-noise ratio: 102dB (A weighted) •Stereo channel separation: 85dB •Damping factor (at 100Hz): >1000 •Input impedance: 22Kohm •Input sensitivity: 300mV, 550mV or 1V switchable •Thermal protection: Max 1h •Short-circuit and overload protection: Max 10 sec. •Power supply: +28VDC and -28DC max •Dimensions: 8.3" x 3.4" x 2.5"

Order #	(1-3 kits)	(4 kits-up)
80-6645	$95.95	$92.65

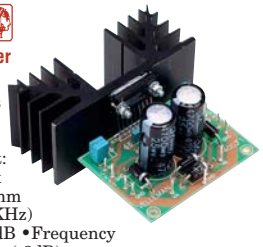


velleman-kit

7 Watt Amplifier Kit

This small amplifier is capable of delivering 4W RMS at 4ohm. The IC is completely thermally and short circuit protected. A conventional direct current can be connected as supply. Music power output: 7W/4ohm. RMS output: 3.5W/4ohm and 2W/8ohm. Total harmonic distortion: 0.05% (1W/1KHz) Frequency response 20Hz~20KHz (-3dB). Signal to noise ratio: 86dB. Input sensitivity: 40mV/150ohm. Overload and short circuit protected. Supply voltage: 15VDC/0.5A (8~18VDC possible). Made in Belgium. Dimensions: 2⅜" x 1³⁄₃₂".

Order #	(1-4 kits)	(5-9 kits)	(10 kits-up)
80-1490	$11.87	$11.59	$10.96

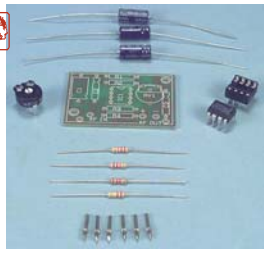


velleman-kit

2 x 30 Watt Stereo Amplifier

This small amplifier will deliver a big sound and is completely thermal and short-circuit protected. **Specifications:** •Output: 2 x 30W/4ohm PMPO, 2 x 15W/4ohm or 2 x 10W/8ohm RMS •.07% THD (1W/1KHz) •Channel separation: 70dB •Frequency reproduction: 7Hz~60KHz (-3dB) •S/N ratio: 98dB (Weighted A) •Input sensitivity: 300mV/150Kohm •Requires 12VAC/2A center-tap transformer •Dimensions: 70 x 50mm

Order #	Description	(1-4)	(5-9)	(10-up)
80-2875	Kit	$35.65	$31.47	$29.37



velleman-kit

Universal Mono Pre-Amplifier Kit

This kit has been developed as pre-module for a number of audio applications where there is insufficient input signal. Applications as a microphone pre-amplifier or for level correction. Ideal for a microphone pre-amplifier or for level correction especially where insufficient input signal exists. Power supply: 10~30VDC/10mA. Output impedance: 1Kohm. Adjustable output level. Frequency range: 20Hz~20KHz -3dB. Maximum input signal: 40mV. Made in Belgium. PCB dimensions: 1¹³⁄₆₄" x 1⁴⁵⁄₆₄".

Order #	(1-4 kits)	(5-9 kits)	(10 kits-up)
80-1505	$10.99	$10.82	$10.04

velleman-kit

Super-Mini Audio Amplifier

Small but powerful amplifier for a wide range of applications e.g. microphone amp, doorbell, melody generator, intercom, sound effects, headphones, radio receiver, PC sound card, musical instrument, and more. **Features:** •Compact size •Low part count •No additional heat sink required •Single supply •Wide supply range •Excellent protection **Specifications:** •Output power: 3W RMS (4~8ohm, 15VDC, 10% THD) •Frequency range: 50Hz~20KHz (1W/8ohm, 3dB) •Gain: 32dB (40x) •Thermal protection •Short circuit protection •Power supply: 6~15VDC •Current consumption: 500mA max. •Dimensions: 1.6" x 1.9"

Order #	(1-3 kits)	(4 kits-up)
80-6490	$13.95	$13.03

velleman-kit

Amp Power Supply Kit

This small power supply provides a regulated voltage adjustable between 1.5 and 35V at 1A. The regulator provides remarkably better ripple and regulation characteristics than conventional regulators. Current limiter and thermal overload protection are included in the chip. Supplied without cooling. Output current maximum: 1.5A. Maximum dissipation: 15W (cooled). Maximum input voltage: 40V. Made in Belgium. PCB dimensions: 2" x 2".

Order #	(1-4 kits)	(5-9 kits)	(10 kits-up)
80-1545	$12.99	$11.84	$10.04

velleman-kit

10–Channel Light Effect Generator Kit

This kit has ten 12V/400mA outputs to control cold–cathode fluorescent lamps, light bulbs, LEDs and solid–state relays. For use as advertisement lighting, party and effects lighting. Select one of the ten pre–programmed light patterns with a push button. Number of used channels and speed are adjustable. LED indicator for every output. Power supply: 12VDC. Outputs: 12VDC/400mA per channel (max 4A). Dimensions: 5.5" x 3.9" x 1.1". Mfr. #K8044.

Order #	(1-4 kits)	(5-9 kits)	(10 kits-up)
80-5890	$34.95	$33.15	$30.61

velleman-kit

Roulette Kit

Try your luck at Roulette with this fun and exciting kit. Features 37 LEDs with a spinning sound. Winner-tune plays for each color. LEDs spin between games. Pushbutton operation. Microprocessor technology. **Specifications:** Auto power-off, low power consumption, power supply: Three "AA" battery operation (not included). Dimensions: 3.6" x 1.3". Mfr. #MK119.

Order #	(1-4 kits)	(5-9 kits)	(10 kits-up)
80-6215	$19.00	$18.39	$17.15

velleman-kit

Magic Message Kit

Amaze your friends. Wave the wand to make the message appear. The message seems to be floating in the air. Includes lots of built-in messages plus enter your own seven character message. **Applications:** Novelty gadget, in emergencies, at concerts or TV-shows, to welcome people, etc. Excellent visibility due to high intensity red LEDs. Low power consumption. Auto power off. Power supply: Two "AAA" batteries (not included). Dimensions: 6.4" x 1.0" x 0.9". Mfr. #MK155.

Order #	(1-4 kits)	(5-9 kits)	(10 kits-up)
80-6220	$19.95	$19.15	$17.69

Velleman

Symmetric 1A Power Supply Kit

Features: •Low cost universal symmetric power supply, just add a suitable transformer and a heatsink •Ideal for e.g. op-amp applications, amplifiers •Trimmers can be replaced by potmeters to allow continuous adjustment of output voltage •LED output indicators **Specifications:** •Positive and negative output adjustable between 1.2 and 24VDC •Output current: Up to 2 x 1A continuous (with suitable heatsink) •Max input voltage: 2 x 24VAC •Very good line and load regulation •Low ripple •Short circuit and thermal protection •Optional heat sink: HS4003 (for maximum 20W dissipation) •Dimensions: 3.1" x 2.0" x 0.9"

Order #	(1-3 kits)	(4 kits-up)
80-6650	$12.95	$12.31

Clap On/Off Switch

Features: •Operate your lighting with a simple handclap •Ideal for disabled or elderly people •Good immunity against surrounding noises •"1-clap" or "2-clap" mode selection •"2-clap" mode features built-in safety turn-off timer (5h approx.) •Output relay "pulse" or "toggle" selection •Microprocessor controlled •Output relay with LED-indicator **Specifications:** •Relay power rating: 24VDC/AC 3A •With DC adaptor socket •Power supply: 12VDC/150mA •Dimensions: 3.1" x 2.9" x 0.9"

Order #	(1-3 kits)	(4 kits-up)
80-6485	$17.95	$16.43

Pocket Audio Generator Kit

Great little gadget for service, repair, testing, education and more. Features microprocessor technology and digital waveform generation. **Specifications:** •Sine wave: 50Hz, 100Hz, 1KHz, 10KHz, 20KHz •Burst: 50Hz, 100Hz, 1KHz •Burst mode: 20ms ON, 500ms OFF •Noise: 32 bit digital pink noise •Output level (10Kohm): 0~775mV (0dB) •Outputs: 2 x RCA (cinch) •Power supply: 2 x CR2016 or CR2025 battery (not included) •Dimensions: 3.4" x 2.0" x 1.0"

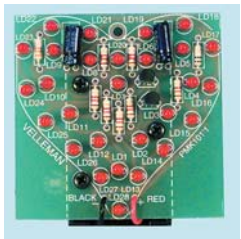
Order #	(1-3 kits)	(4 kits-up)
80-6655	$32.95	$30.85

Temperature Sensor Kit

Applications: Measure indoor and outdoor temperatures; control heating and/or cooling of rooms, equipment, etc; monitor temperatures in processes; put a temperature readout on your website; check your pools temperature and more. **Specifications:** •Range: -20°~+70°C •Output: 0~20mA current loop •Output voltage compliance: 10V •Accuracy: 2° full range •One single adjustment •3-wire system: GND, +V and OUT •Power supply: 12VDC for 0~5V OUT/15VDC for 0~10V OUT •Current consumption: 30mA max •Dimensions: 2.2" x 1.4" x 0.6"

Order #	(1-3 kits)	(4 kits-up)
80-6660	$18.95	$17.46

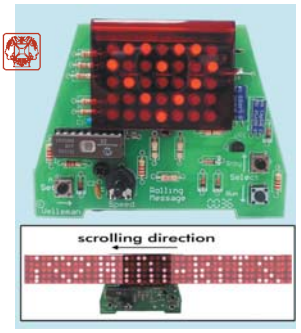
Flashing LED Heart Kit



This fun, easy to build kit has 28 LEDs, which form two blinking hearts. Requires one 9V battery (not included). •Mfr. #MK101

Order #	(kit)
80-5125	$11.17

Scrolling Message Kit



Create your own moving message with a maximum of 16 characters. 35–LED graphic display with adjustable scrolling speed. Requires 9~12VDC power supply, not included. Dimensions: 1.8" x 3.5" x 2.6". Mfr. #MK124.

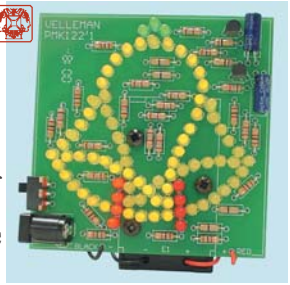
Order #	(1-4 kits)	(5-9 kits)	(10 kits-up)
80-5920	$19.72	$18.68	$17.64

Crawling Microbug Kit

Attractive bright colored bug–shaped robot. It is always hungry for light and crawls toward it. Adjustable light sensitivity suits various light conditions and controls it's bug–like behavior. Choose between two different walks. Adjustable speed. LEDs indicate driving direction. Stops in total darkness. Requires two "AA" batteries (#292-015) not included. Mfr. #MK129.

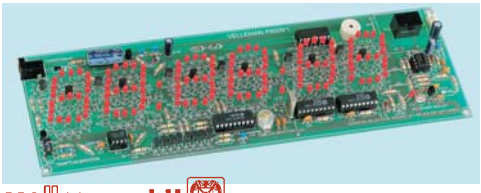
Order #	(1-4 kits)	(5-9 kits)	(10 kits-up)
80-5905	$18.68	$18.17	$17.10

Animated Bell Kit



Have fun and learn about LEDs while building this animated kit. 83 LEDs simulate bell's movement. On/off switch. Requires one 9 volt battery (#292-035) or 9~12VDC adaptor, not included. Mfr. #MK122.

Order #	(1-4 kits)	(5-9 kits)	(10 kits-up)
80-5910	$18.95	$17.40	$16.07

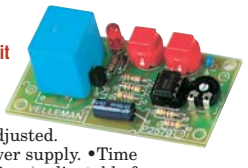


Multifunction Clock Kit

Time, date or temperature indication is selectable. Count up or down. Count down function to a specific date, the last day H:M:S are displayed. Scoreboard function, two players counts up to 199. Two digit dice random generators number from 00 to 99. One–second chronometer with lap function. Chime beep option. Relay output for temperature control or time alarm. US or Europe display option for time and date. Degrees Celsius or Fahrenheit formats for temperature. All functions and settings are wireless remote controlled. Includes key–chain remote. Optional enclosure available separately. **Specifications:** •Transmitter frequency: 433.92MHz •Relay output: 1A/24V max. •Power supply: 12VDC, 300mA. Requires one 9V battery for back-up (#292-035) not included. PCB dimensions: 10.0" x 3.2". Mfr. #K8009.

Order #	Description	(1-4 kits)	(5-9 kits)	(10-up kits)
80-5925	Clock Kit	$119.00	$110.09	$101.68
80-5930	Enclosure	28.43	27.41	26.48

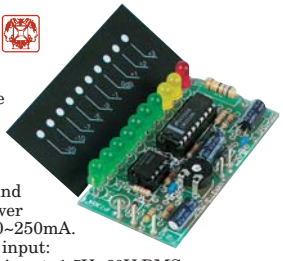
Universal Start/Stop Timer Kit



Miniature timer for all applications requiring a delay of up to 60 minutes. The control range can be adjusted. Requires 12VDC/55mA power supply. •Time interval (without modifications) adjustable from 0~15 minutes •PCB dimensions: 38 x 69mm

Order #	(1-4 kits)	(5-9 kits)	(10 kits-up)
80-2855	$15.95	$13.95	$12.11

LED VU Meter Kits



These VU meters come with 10 LED scale, adjustable input and light bar display. Also comes with two front panels for horizontal and vertical mounting. Power supply: 10~15VDC/110~250mA. Input sensitivity: Low input: 150mV~6V RMS, high input: 1.5V~60V RMS. Made in Belgium. Dimensions: 1 13/32" x 5 13/32".
•**Limited quantities**

Order #	Description	(1-4 kits)	(5-9 kits)	(10 kits-up)
80-1520	Mono	$23.44	$21.75	$19.63
80-2880	Stereo	30.86	29.82	28.79

12 Character Message Display Kit

Use this kit to create your own messages for personal advertisements. Special features include scrolling, blinking, rolling and panning. Designed for 12 character positions and includes 150 bright LEDs. Features include microprocessor technology, oscillator output for synchronization with other displays and is reverse polarity protected. Requires a 12~28VDC, 800mA power supply. Dimensions: 80 x 473mm.

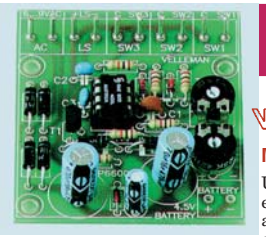
Order #	Description	(1-4 kits)	(5-9 kits)	(10 kits-up)
80-2920	Red display	$84.95	$78.02	$72.06
80-3840	Green display	84.95	81.91	75.00
80-3845	(50) Red LEDs	9.95	9.34	8.63
80-3855	Housing for kit	39.95	37.34	34.49

Universal Battery Charger/Discharger

Many battery chargers are available, but few are universal chargers. Using this kit, NiCd and NiMH batteries of different voltages can be charged both quickly (52 minutes) and normally (14 hours). In order to ensure that the battery is fully discharged prior to charging and thus has a longer life cycle, an automatic discharger is also fitted. **Specifications:** •Charge current: from 15mA~750mA (selectable) •Usable battery voltages: 1.2V, 2.8V, 3.6V, 4.6V, 6V, 7.2V, 8.4V and 9.6V •Automatic discharge and charge cycle •Dimensions: 3.4" x 3.1"

Order #	(1-3 kits)	(4 kits-up)
80-6500	$23.95	$22.65

Velleman



velleman-kit

Multi-Tone Chime Kit

Use this kit to replace an existing doorbell or any application that requires an audible signal. The number of tones may be selected up to a maximum of three, each of which is output one after the other. Features adjustable tones and volume control and requires an 8ohm speaker. Requires a 6~9VAC, .2A power supply or can operate with three 1.5V batteries. Dimensions: 53 x 59 x 25mm.

Order #	(1-4 kits)	(5-9 kits)	(10 kits-up)
80-2925	$25.70	$24.67	$22.61

velleman-kit

Remote Control by Telephone Kit

Turn up to three devices on or off over the telephone. Uses audio signals to tell whether a specific output has been turned on or off (open or closed switch). Operation is protected by a user defined code, which is simply keyed in from the telephone keypad. Relay included for one output (10A/250VAC). Automatic pick-up can be selected for ±8 or 3 rings. Automatic hang-up if no code is entered within 20 seconds. Supply voltage: 12VAC/300mA. Housing cover not included. Made in Belgium.

Order #	(1-4)	(5-9)	(10-up)
80-1475	$74.12	$72.10	$65.53

Voice Changer Kit

This kit is able to change your voice. Will change voices to the following: "VIBRATO" makes your voice flutter, "UPWARD" will change your voice up to a higher tone, "DOWNWARD" will change your voice to a lower tone, and "ROBOT" will synthesize your voice. 9V battery required for operation.

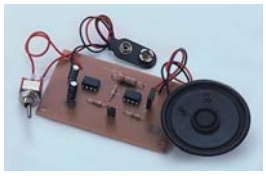
Order #	(kit)
28-5670	$9.22

IC Shortwave Radio Kit

Imagine tuning in to the world with your own short wave receiver. Kit may be used to tune short wave broadcasts from other countries, listen to amateurs talking to each other, learn Morse code from slow transmissions etc. 9V battery (not included) required for operation.

Order #	(kit)
28-5845	$8.31

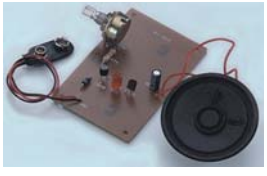
Electronic Siren Kit



Here is a project that is both fun to make and is very useful. Kit simulates a modern police siren and is capable of making other similar sounds. Kit may also be used with alarm kit #28-5635. 9V battery (#293-040) not included required for operation.

Order #	(kit)
28-5640	$6.13

Sound Effects Generator Kit



Kit makes the following sounds: Motor boat, speed boat, water drops on tin roof, heart monitor, grandfather clock ticking, or even a cricket. 9V battery required (not included).

Order #	(kit)
28-5605	$5.10

Sorry-software, videos and books are not returnable.

VCR Repair Pack

Great for learning VCR repair or training new employees. Contains six videocassettes: #32-2095 VCR Cleaning, 32-3000 VCR Repair Vol. 1, 32-3295 Bad Video Heads, 32-3635 Top Ten Electronic Problems, and 81-2220 G Chassis VCR Repair. Save over $45.00 by purchasing as a package.

Order #	(ea.)
81-2655	$181.75

Basic Soldering and Desoldering Techniques

Finally, a hands-on instructional video that displays the proper techniques for making perfect PCB solder joints, including surface mount technology (SMT). From start to finish this video covers it all: Cleaning and board preparation, iron types and wattages, tip styles and uses, solder, heatsinking, proper component placement and more. Learn how to make the proper equipment choices to do the job right the first time. The last section of the video deals with proper desoldering methods using various vacuum and pump tools, as well as braids and wicks. Whether you're a seasoned technician or just a beginner, you'll find the procedures presented to be invaluable. VHS.

Order #	(ea.)
81-3188	$25.29

UCANDO

"TV and Radio Series" Educational Video Tapes

Computer animated videos that teach the fundamentals of TV and FM reception.

Order #	Topic	(ea.)
81-2225	TV Part 1: Intro to TV	$34.95
81-2230	TV Part 2: The Front End	34.95
81-2275	TV Part 3: Audio	34.95
81-2390	TV Part 4: AGC & Sync	34.95
81-2778	TV Part 5: Convergence	34.95
81-2935	TV Part 6: Color	34.95
81-3055	TV Part 7: Color Demodulation	34.95
81-3060	TV Part 8: Power Circuits	34.95
81-3065	TV Part 9: Projection TVs	34.95
81-1915	AM Radio	34.95
81-1920	FM Radio Part 1	34.95
81-1925	FM Radio Part 2	34.95

UCANDO

"Digital Electronics" Educational Video Tapes

Computer animated videos that covers the different devices used with digital electronics.

Order #	Topic	(ea.)
81-1885	Part 1; Gates	$34.95
81-1890	Part 2; Flip Flops	34.95
81-1895	Part 3; Registers, Displays	34.95
81-1900	Part 4; DAC and ADC	34.95
81-1905	Part 5; Memory Devices	34.95
81-1910	Part 6; The CPU	34.95

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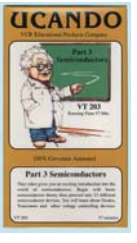

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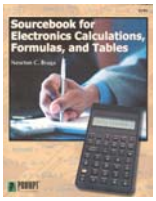

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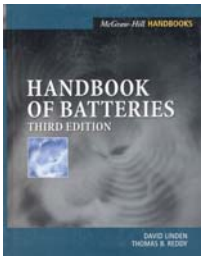

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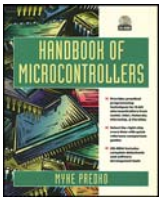

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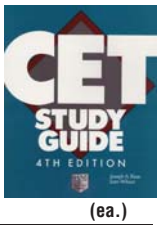

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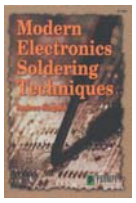

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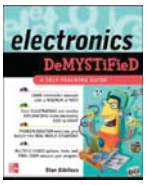

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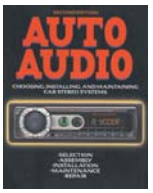

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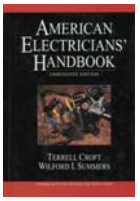

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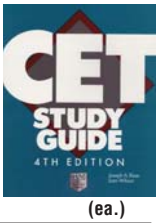

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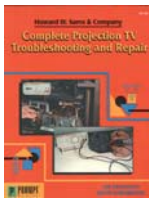

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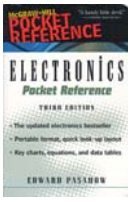

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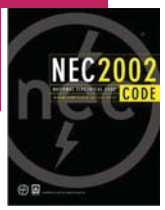

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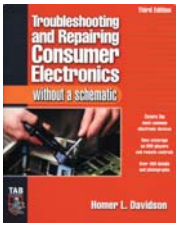

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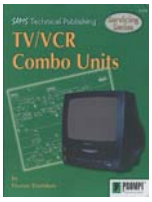

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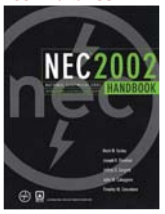

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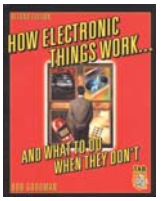

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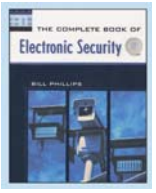

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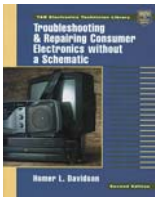

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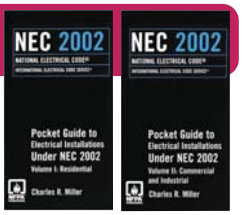
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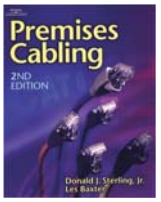

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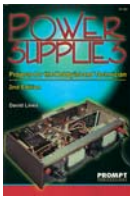

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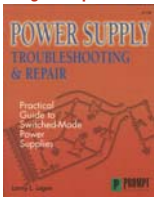

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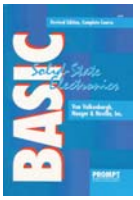

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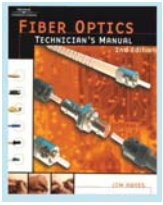

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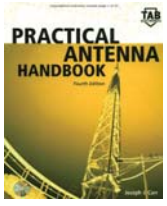

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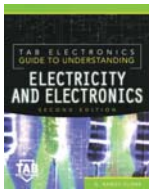

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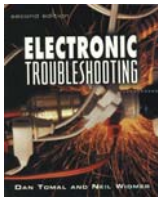

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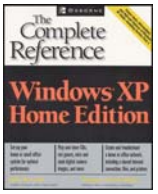

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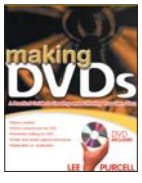

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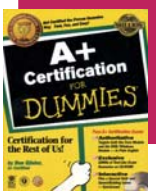

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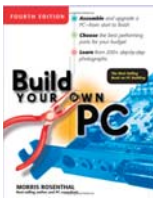

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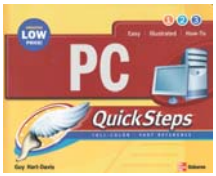

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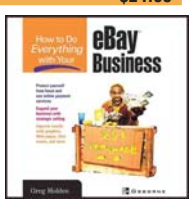

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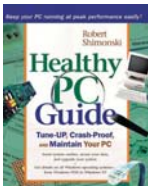

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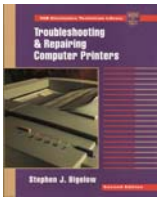

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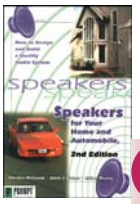

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